ABSTRACT

[1075] A VCO with temperature compensation is achieved using reverse biased diodes. The VCO includes an amplifier that provides the required signal gain, a resonator tank circuit that provides the required phase shift, and at least one frequency tuning circuit for tuning the frequency of the oscillator signal. Each frequency tuning circuit includes at least one tuning capacitor and at least one MOS pass transistor that connects or disconnects the tuning capacitor(s) to/from the resonator tank circuit. Each reverse biased diode may be a parasitic diode that is formed at a drain or source junction of a MOS transistor. The reverse biased diodes have capacitance that can be controlled by a reverse bias voltage to compensate for drift in the VCO oscillation frequency over temperature.